

# *The* MOSHER-LESLEY SCHEMATOGRAPH

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The Schematograph is an instrument for easily recording posture outlines of the human figure



# DESCRIPTION

The Schematograph (from *schema*, form, shape; *grapho*, I write) is an instrument devised by Dr. Clelia Duel Mosher, of the Department of Hygiene, in co-operation with Professor E. P. Lesley, of the Mechanical Engineering Department, of Leland Stanford Junior University, California.

This apparatus consists of a reflecting camera. A clear glass forms the upper surface. On this is laid a piece of thin tracing paper. The image is thrown upon this paper and outlined or fully drawn with a pencil or pen, resulting in the schematogram (*gramma*, thing written).

The top of the Schematograph carrying the clear glass plate is movable. The change in position of this top makes it possible to record the image on any portion of the paper without moving the paper on the glass.

A screen for the background is seven feet high and four feet broad. There are two movable panels nearly the full size of the screen. These button into the framework. The removable white panel is used as a reflecting surface to increase the light on a dark day. On the black panel are stretched two white wires at right angles to each other, thus dividing the black screen into four equal sections. These lines should always be drawn on the tracing paper before the subject is placed for the making of the schematogram. This does away with loss of time in trying to place the tracing paper with very great exactness on the Schematograph.

# HOW USED

The center of the figure, or that part of the figure of which it is desired to make a schematogram, is placed directly in front of the lens, at a distance of about ten feet. The image is, therefore, always projected to the center of the camera, thus giving the maximum of light and clearness of definition.

In use the camera will be placed in a dark room or screened with dark cloth. The subject for study (posture, spinal curvature, etc.) is placed in a strong light before a dark screen or behind a light screen. In the former case the picture upon the tracing paper is that of the subject; in the latter case the picture is of the shadow of the subject.

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The strong light may be a 1,000-watt nitrogen-filled Tungsten lamp, or the photo-light with a clear lamp. The work with the figure placed before the black screen has been satisfactory and less expensive than the shadow work.

It is possible to record on a single sheet of paper a schematogram of the front, the back, and a profile of the figure. The figure in the schematogram is about eight inches in height. The image, of course, is reversed in the schematogram. The key number and any other data should be put on the sheet as it is placed on the Schematograph.

The placing of the Schematograph in a closet, open at the top for ventilation, with an opening in the wall just large enough for the lens, has a distinct advantage. The examiner using the instrument is in a separate room and thus the personal reserve of the individual reflected is respected.

## USES

By this graphic record the exact condition of any individual student can be indicated.

The definition of the image is so clear that not only the outline of the figure may be made, but the positions of the scapulae, the prominence of the collar bones; the supra and intraclavicular hollows may be indicated. In a very thin person even the costal angle or the line of the spine has been clear enough to record without resort to markings of the skin to show the position.

By making a series of schematograms at intervals one may, at minimum cost of less than two cents each and an expenditure of time of only from one and one-half to two and one-half minutes, exclusive of dressing and undressing, record the effect of physical-training work on the individual. In addition to this, by the study of the schematograms of groups of students doing different forms of exercise, we may arrive at some estimate of the comparative value of these different kinds of physical training.

This instrument may be used not only by the medical examiners for admission to colleges and gymnasiums, but a further possible field of usefulness for it may be found in the offices of certain physicians and surgeons. Whenever a graphic record of the contours and other conditions of the body will be of service, the Schematograph provides a rapid, inexpensive and accurate means of making such a record. It requires no special knowledge of drawing, although facility in the use of pen or pencil will make the work more rapid. Accuracy in recording the image thrown on the tracing paper and a knowledge of what it is desired to record, are all that is needed.

The Schematograph bearing the official label of approval of the American Posture League, and accessories may be obtained as follows:

SCHEMATOGRAPH .....	<del>\$10.00</del> <sup>30.00</sup>
TRACING PAPER, one package of two hundred sheets (8½ x 11 in.)	3.25
SCREEN, seven feet high and four feet wide—one side black and the other white, made especially for use with the Schematograph.....	7.50
CAMERA STAND, adjustable for height and distance.....	9.00
FOCUSING CLOTH, 36 by 36 in.....	.30
PHOTO LAMP, Blue Mazda 1,000 watt .....	12.00

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## Posture Standards Company, Inc.

30 Church Street, New York